

Notes on Some Species of the Subtribe Harpalina (Coleoptera, Carabidae, Harpalinae, Harpalini) from Korea and Adjacent Areas

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Abstract Thirty species from the Korean peninsula belonging to the subtribe Harpalina are discussed with comments on their distribution, taxonomic status, and type information. Five of them are reported for the first time from Korea.

Keywords *Harpalus*, *Ophonus*, *Pseudoophonus*, Carabidae, Coleoptera, Korea, Russian Far East

INTRODUCTION

For last several years, Prof. Jong Cheol Paik and Mr. Chang Sup Moon, Suncheon National University, have continued an intricate work on the systematics of the subtribe Harpalina from Korea. To assist them, I am going to prepare some data accumulated to me on the subtribe, based on the result of the examination of materials and types in the Zoological Institute, St. Petersburg, Russia, in 1972-74, including A. Morawitz, T. Tschitscherin, and partly V. Motschulsky's collections and later in the Institute of Biology and Pedology, Vladivostok, Russia, including Prof. Chu Dong Ryul's (Pyeongyang, N Korea) small collection deposited in the Institute. The Korean materials of the Zoological Institute were mainly collected by Prof. P. Schmidt (St. Petersburg) in the central and southern part of the Korean peninsula in 1900, and by Prof. W. S. Borchsenius (St. Petersburg) in the northern part in 1950.

Schmidt's collecting localities for the route Wonsan-Pusan-Taegu-Seoul are as follows: Tongchon, 45 km SE of Wonsan, GW, North Korea; Dorae, about 30 km SW of Kangnung, GW, Central Korea; Olchonsa (=Woljeungsa), Mt. Odae-san in the canyon of Odaechon river, 27 km SW of Kangnung, GW, Central Korea; Shovuni, about 45 km SW of Kangnung, GW, Central Korea; "Mt. Sanbonsan", in vicinity of Mt. Sobaek-san, 45 km NW Andong, CB, South Korea; Bupun-Chancto, about 60 km NW of Taegu, CB-JB, South Korea; Mt. Buchu, about 80 km NW of Taegu, CB-JB, South Korea; Kwancheon, 20 km SW of Seoul.

Borchsenius' collecting localities are as follows: Cheongju, about 90 km NW of Pyeongyang, PB, North Korea; Sinangju, about 70 km NW of Pyeongyang, PN, North Korea; Yandok, about 80 km NE of

Pyeongyang, PN, North Korea; Sariwon, 50 km S of Pyeongyang, HH, Central Korea; Hyesan (=Hyesanjin), at the northern boundary, HN, North Korea; Kapsan, about 30 km S of Hyesan, HN, North Korea; Puckchong, 75 km NE of Hungnam, HN, North Korea; Maedun, probably between Hungnam and Puckchong, HN, North Korea; Nungi, probably near Puckchong, HN, North Korea.

The specimens of Prof. Chu Dong Ryul's collection are labelled badly: usually with only numbers, sometimes with labels with inscription in Korean. In this paper, on some species which are hitherto not known from Korea but inhabiting Russian territory near the Korean boundary, are also included.

A total of 30 species belonging to 4 genera are discussed herein. Some species have been cited with poor or inaccurate information in Korean literatures, or were not previously known from Korea, but inhabiting Russian Territory near the Korean boundary. Four species have not been known from Korea (marked by asterisk). Informations on the distribution of some species listed below were mentioned in my previous work (Lafer, 1989), but the collecting localities of these species are reported herein for the first time.

The abbreviations used for institutes and provinces in Korea are as follows: IBP-the Institute of Biology and Pedology, Vladivostok, Russia; SU-the Sunchon National University, Sunchon, Korea; ZIP-the Zoological Institute, St. Petersburg, Russia; ZMM-the Zoological Museum of the Moscow University, Moscow, Russia; HB-Hamgyeong bukdo, HN-Hamgyeong namdo, PB-Pyungan bukdo, PN-Pyungan namdo HH-Hwanghae do, KW-Kangwon do, KK-Kyungki do, CB-Chungcheong bukdo, CN-Chungcheong namdo, JB-Jeolla bukdo, JN-Jeolla namdo, KB-Kyungsang bukdo, KN-Kyungsang namdo, JJ-Jeju do.

I wish to express my cordial gratitude to Prof. J. C. Paik, Suncheon National University, for his invitation (July, 1994 and July, 1995), and for his help in collecting and examining specimens during my stay in Suncheon, Korea, and also Prof. K. T. Park, Kangwon National University, for his invitation to Chunchon and reading of the manuscript of this article.

Genus *Ophonus* Dejean, 1821

Three species belonging to the genus *Ophonus*; *O. chinensis* Tschitsch., *O. hystrix* Reitt. and *O. stricticollis* Tschitsch., are known from the eastern Asia; none of them is known from Korea, but *Ophonus stricticollis* was collected in the Russian Territory near the northern boundary of Korea.

1. *Ophonus stricticollis* Tschitschérin, 1893

Tschitsch., 1893, Horae Soc. Entomol. Ross 77: 359-360, 371-372

= *nikolskyi* Jedl., 1932: 326

Notes. Based on comparison with Jedlička's original description of *O. nikolskyi* and the syntypes of *O. stricticollis*, in 1972, which are preserved in ZIP, I confirmed that both species were identical. However, the synonymy of the species was recently published by Kryzhanovsky et al. (1995). *O. nikolskyi* was described on the basis of a single specimen from "Nikolsk-Ussuriysk" (Ussuriysk, Primorye Territory, Russia). Based on my preliminary acquaintance with the syntypes of *O. chinensis* Tschitsch. from Gansu (ZIP), I suppose that this species is apparently a junior synonym of *O. stricticollis*.

Material examined. The syntypes of *O. stricticollis*, with the same labels: 1) "Siberia or. G. [Gorny] Zerentui. I. Wagner" and 2) "*stricticollis* m. Typ!, Tschitschérin det." (Tschitschérin's collection, ZIP), are female, even though Tschitschérin stated a male and female in his original description. 1 ♂ with the labels: "Primorye, Khasan, 19. VI 1971. Grunin leg." (in Russian, ZIP) and "*Ophonus stricticollis* Tschit. O. Kryzhanovskij det. 971".

Distribution. *O. stricticollis* is known hitherto from Russia (Tschita and Amur Regions, Primorye Territory), however it is very rare throughout. Its range probably extends Mongolia, NE China and Korea.

Genus *Pseudoophonus* Motschulsky, 1844

At least 17 species of the genus *Pseudoophonus* have been known from the Korean peninsula, however, only 15 species belonging to three subgenera are currently recognized. Discussing on the following 12 species herein, I propose *P. niigatanus* Sahauberger as a subspecies of *P. tschiliensis* Schauburger, and *vicarius* Harold as a subspecies of *P. ussuriensis* Chaudoir. *Pseudoophonus. pseudophonoides* Schauburger was not found in the collections of ZIP, but I collected this species by myself in Cheju Island in 1994 and found additional specimens from the southern part of Korean peninsula in the collection of Prof. J. C. Paik, Sunchon National University. I suppose that the most of the previous records for *P. babai* Habu and *P. horni* Jedl. from Korea are probably due to misidentification, and they probably are either *P. davidi* Tschitsch. or *P. sinicus* Hope. The latter is characterized by the obliterated dents at apical spurs of protibiae. I examined many of such specimens in the material from the southern part of the Korean peninsula.

Subgenus *Pardileus* Gozis, 1882

= *Platus* Motschulsky, 1844: 197. Nomen nudum.

1. *Pseudoophonus (Pardileus) calceatus* (Duftschmidt, 1821)

Duftschmidt, 1812: 81 (Carabus); Mlyänř, 1974: 107; Lafer, 1989: 181.

Material examined. 3 ex., Nungi, HN, N Korea, 7. VIII 1950. (Borchsenius leg) in (In Russian, ZIP)

Distribution. Korea (North, Central, South, Jeju), Japan (throughout), China, Mongolia, Russia (European part, Siberia, Amur Region, S khabarovskiy Primorsky Territory), Kazakhstan, Asia Middle, Afghanistan, Europe.

Subgenus *Pseudoophonus* Motschulsky, s. str.

2. *Pseudoophonus (Pseudoophonus) aenigma* Tschitschérin, 1897

Tschitschérin, 1897: 47; Mlyänř, 1974: 107, 112-117.

Notes. *Pseudoophonus aenigma* was described on a single female deposited in ZIP. The holotype is labelled: "Korea (Staud.-Rttr.)" and "*Aenigma* m. Typ. Tschitschérin det." The first report for this species from Korea was by Mlyänř (1974) from Mt. Myohyangsan, Pyungan bugdo, N Korea. He

examined two males from this locality and described on characters of the aedeagus and endofallus. Mlýňň suggested that *P. aenigma* Tschitsch. and *P. pseudophonoides* Schaub. are the most closely related each other in the genus, but I consider that Tschitschérin's opinion, which *P. aenigma* is more closely linked with *P. coreanus* Tschisch, would be more acceptable.

Distribution. Korea (North).

3. *Pseudoophonus (Pseudoophonus) coreanus* Tschitschérin, 1895

Tschitschérin, 1895: 156-158; Jedlička, 1960: 231; Mlýňň, 1974: 107; Lafer, 1989: 183.

Notes. Two syntypes of the species in ZIP, which I examined in 1972, are males. The first specimen is labelled: 1) "Korea (Staud.-Rttr.)", 2) "*tridens* A. M. v. *coreanus* m. Typ. Tschitschérin det." The second one is labelled: 1) "Korea (Staud.-Rttr.)", 2) "*v. coreanus* m. Tschitschérin det." The first specimen, indicated as "type" by Tschitschérin himself is designated herein as a lectotype of *Pseudoophonus coreanus* Tschitsch, but the second one as a "paralectotype", is revealed that it is certainly *P. tschiliensis* Schaub., from the result of the examination of syntypes. In the lectotype, denticles at pronotal hind angles are noticeably obliterated; that is probably why Tschitschérin could not find the difference between two syntypes.

Material examined. 1 ♀ with the labels: 1) "Korea, 1956. Dr. Magyar"; 2) "Tschon-Bon-san, 3. IX"; 3) "*Pardileus coreanus* Tschitsch. det. Jng. Jedlička" (ZIP), it is apparently the specimen that Jedlička (1960) reported in his paper. "Tschon-Bon-san" is probably Cheong-Bang-san valley near Sariwon, HH, N Korea. I also collected *P. coreanus* in the southern part of Prymorye Territory near the Korean boundary. *P. coreanus* is distributed in the northern part of Korean peninsula at least to Wonsan in the south, and it maybe sympatric with *P. aenigma* Tschitsch.

Distribution. Korea (North, Central), NE and E China, Mongolia, Russia (S Khabarovsky and Primorsky Terr., Amur and Tschita Regions, S Buryatia).

4. *Pseudoophonus (Pseudoophonus) eous* Tschitschérin, 1901

Jedlička, 1960: 231; Mlýňň, 1974: 106-7; Paik, 1988a: 245; Lafer, 1989: 182.

Material examined. 1 ex., Nungi, HN, N Korea, 7. VIII 1950. Borchsenius leg.; 1 ex., Hyesanjin, HN, N Korea, 16. VIII 1950. Borchsenius leg.; 1 ex., Puktcheong, HN, N Korea, 5. VIII 1950. Borchsenius leg.; 1 ex., Sariwon, HH, N Korea, 20. VII 1950, Borchsenius leg.; 1 ex., Kherin near Kapsan, HB, N Korea, 11. VII 1950, Borchsenius leg. All the above specimens in ZIP with labels in Russian.

Distribution. Korea (North, South, Jeju), Japan (throughout), NE and E China, Mongolia, Russia (S khabarovsky and Primorsky Terr., Amur and Tschita Regions, S Buryatia).

5. *Pseudoophonus (Pseudoophonus) griseus* (Panzer, 1797)

Panzer, 1797: N 1 (Carabus); Kolbe, 1886: 175; Bates, 1888: 370; Ganglbauer, 1892: 341, 346; Jedlička, 1960: 231; Mlýňň, 1974: 106; Paik, 1988a: 245; Lafer, 1989: 182.

Material examined. 22 ex. from various places, in N Korea, 1950. Borchsenius leg. (ZIP); 3 ♀, N Korea, Chu Dong Ryul leg. (IBP).

Distribution. Korea (North, Central, South, Jeju), Japan (throughout), China, Mongolia, Russia (Europe part, Siberia, Amur Region, S Khabarovsky and Primorsky Terr., Sakhalin, S. Kuriles), Asia Minor, Afghanistan, Europe, NW Africa.

6. *Pseudoophonus (Pseudoophonus) jureceki* Jedlička, 1960

Jedlička, 1960: 231; Mlýanř, 1970: 106; Paik, 1988a: 245-246; Lafer, 1989: 182-3.

Material examined. 18 ex. from various different places in N Korea, 1950, Borchsenius leg. (ZIP).

Distribution. Korea (North, Central, South, Cheju), Japan (throughout), NE and E China, Russia (Amur Region, S Khabarovsky and Primorsky Terr., Sakhalin).

7. *Pseudoophonus (Pseudoophonus) roninus* Bates, 1873

Bates, 1873: 260; Heyden, 1887: 246; Tschitschérin, 1895: 155; Mlýanř, 1970: 107; Paik, 1988a: 246, 1993: 105; Lafer, 1989: 182; Paik, 1993: 105.

Material examined. 2 ex., "Korea" (ZIP); 2 ex., "Gensan teste Stauding."; 1 ex., "N. Korea, basin of Jalu River [=Ammokgang], PB, N Korea, 23. VIII-3. IX 1897. Komarov", Tongchon, 45 km SE Wonsan, N Korea, 28. VI 1900. P. Schmidt leg.; 2 ex., Dorae, KW, N Korea, 19. VII 1900. P. Schmidt leg.; 1 ex., Shovuni, KW, S Korea, 21. VII 1900, P. Schmidt leg.; 1 ex., Nungi, HN, N Korea, 7. VIII 1950, Borchsenius leg.; 5 ex., Olchonsa, KW, N Korea, 20. VII 1900, P. Schmidt leg.; All the specimens in ZIP with labels in Russian, except two specimens from Gensan (=Wonsan).

Distribution. Korea (North, Central, South, Jeju), Japan (Honshu, Kyushu, Tsushima), NE and E China, Mongolia, Russia (Amur Region, S Khabarovsky and Primorsky Terr.).

8. *Pseudoophonus (Pseudoophonus) simplicidens* Schaubberger, 1929

Schaubberger, 1929: 192; Jedlička, 1960: 231; Lafer, 1989: 183.

Material examined. 1 ♀ with the labels: 1) "Korea, 1956. Dr. M. Magyar", 2) "Sariwon, 1-6. IX"; 3) "*Pardileus tschiliensis* Sch. det. Jedlička" (ZIP). I came to the conclusion that this specimen is certainly *P. simplicidens* Schaub, by the comparison of it with cotypes of the latter and using a key of Habu (1973).

Distribution. Korea (Central, South), Japan (throughout), NE and E China, Mongolia, Russia (S Primorsky Terr.).

9. *Pseudoophonus (Pseudoophonus) sinicus sinicus* Hope, 1845

Jedlička, 1960: 231; Mlýanř, 1974: 107; Paik, 1988: 246, 1993a: 105, 1993b: 84; Lafer, 1989: 183; Paik, 1993a: 105, 1993b: 84.

Material examined. 1 ex., "Tumen-Ula" [=Tumangang river], HB, N Korea, 3. VII 1913. Tscherskij

(in Russian); 1 ♂, with the labels: 1) "Korea, 1956. Dr. M. Magyar"; 2) "Sariwon, 1-6, IX"; 3) "*Pardileus sinicus* Hope. det. Jedlička"; 2 ex., Sariwon, HH, N Korea, 19. VII 1950. Borchsenius (in Russian); 1 ex., Cheongju, PB, N Korea, 11. VII 1950, Borchsenius (in Russian). All the above specimens in ZIP with labels in Russian.

Distribution. Korea (North, Central, South, Jeju), Japan (throughout), NE and E China, Vietnam, India (Kashmir), Russia (S Primorsky Terr.).

10. *Pseudoophonus (Pseudoophonus) tridens* Morawitz, 1862

Morawitz, 1862b: 245; Kolbe, 1886: 75; Tschitschérin, 1895: 156; Mlyänř, 1974: 107; Paik, 1988: 246, 1993a: 105, 1993b: 84; Lafer, 1989: 183; Paik, 1993a: 105, 1993b: 84.

Material examined. 2 ex., Tumangang River, Podgomaya [Primorsky Terr., Russia], 15. VIII 1913, Tcherskij leg. (ZIP).

Distribution. Korea (North, Central, South, Jeju), Japan (throughout), NE and E China, India.

11. *Pseudoophonus (Pseudoophonus) tschiliensis* Schaubberger, 1929

Jedlička, 1960: 231; Mlyänř, 1974: 107; Lafer, 1989: 183; Paik, 1993a: 105, 1993b: 84; Paik & Kwon, 1993b: 11.

Notes. All the specimens examined are probably belonged to the subspecies, *sutschanensis* Schaub., but further careful investigation is needed to clarify the taxonomic status for the specimens distributed in the southernmost of the Korean peninsula.

Material examined. 33 ex., Nungi, HN, N Korea, VIII 1950, Borchsenius leg.; 1 ex., Pukchong, HN, N Kores, 8. VIII 1950, Borchsenius leg. (All the labels of above specimens in Russian); 1 ♂, 2 ♀, North Korea, no locality, Chu Dong Ryul leg. (in Korean, IBPV).

Distribution. Korea (North, Central, South, Jeju), Japan (throughout), China, Mongolia, Russia (Amur Reg., S Khabarovsky and Primorsky Terr., S Kuriles).

12. *Pseudoophonus (Pseudoophonus) ussuriensis* Chaudoir, 1863

Chaudoir, 1863: 219; Tschitschérin, 1895: 155-6 (*vicarius* Har.); Mlyänř, 1974: 106; Paik, 1988a: 246-7 (*vicarius* Har.); Lafer, 1989: 182.

Material examined. 1 ex., Yandok, HN, N Korea, 8. VIII 1950, Borchsenius leg. (ZIP).

Distribution. Korea (North, Central, South, Cheju), Japan, China (to Tibet in the West), Mongolia, Russia (Amur Reg., S Khabarovsky and Primorsky Terr., S Kuriles, Sakhalin).

Genus *Harpalus* Latreille, 1802

At least 22 species belonging to the genus *Harpalus* have been recorded from Korea, but some of them were probably misidentified. Sixteen species are discussed below, among them 5 species are new to the Korean fauna (marked by asterisk).

Subgenus *Loboharpalus* Schaubberger, 1932

1. *Harpalus (Loboharpalus) rubefactus* Bates, 1873

Bates, 1873: 264-265; Tschitschérin, 1899: 323-4 (*lobipes* Tschitsch.); Jedlička, 1931: 7-8, 1960: 231; Mlýň, 1974: 107 (*lobipes* Tschitsch.); Lafer, 1989: 183-184; Moon, 1995: 11-13, 76.
= *lobipes* Tschitschérine, 1895

Material examined. 3 ♂, 2 ♀, syntypes of *H. lobipes* Tschitsch. with the same locality data but different dates: North Korea, basin of Jalu River [=Amnokgang], 9-22. VIII 97 (23. VIII-3.-IX 97), "V. Komarov" and "*lobipes* m. Typ. Tschitschérin." (in Russian, ZIP); 91 ex., "Tumangang River, Russ. - Korean boundary", S. Primorsky Terr., Russia, N Korea, VII-VIII 1913. Tscherskij leg. (in Russian, ZIP); 31 ex., Nungi, HN, N Korea, 7. VIII 1950. Borchsenius leg.; 1 ♂, 3 ♀, North Korea, Chu Dong Ryul leg. (in Korean, IBPV).

Distribution. Korea (North, Central, South), Japan (Honshu), China (to Sichuan), Russia (S Primorsky Terr.).

Subgenus *Actephilus* Stephens, 1833

2. *Harpalus (Actephilus) longipalmatus* Mordkowitz, 1969

Mordkowitz, 1969: 628, 629.

Material examined. 6 ex., Nungi, HN, N Korea, VIII 1950, Borchsenius leg. (in Russian, ZIP).

Distribution. Korea (North), Russia (S Siberia from Altai to Buryatia).

Subgenus *Haploharpalus* Schaubberger, 1926

3. *Harpalus (Haploharpalus) corporosus* Motschulsky, 1861

Motschulsky, 1861: 3; Heyden, 1887: 246; Jedlička, 1960: 231; Mlýň, 1974: 107; Paik, 1988: 244-5, 1993a: 105.

Material examined. 1 ♀, without locality, North Korea, Chu Dong Ryul leg. (In Korean, IBP).

Distribution. Korea (North, Central, South, Jeju), Japan (Hokkaido, Honshu), NE and E China (to Sichuan), Russia (S Kuriles, Sakhalin, S Khabarovsk and Primorsky Terr., Amur Reg.).

4. *Harpalus (Haploharpalus) crates* Bates, 1873

Bates, 1873: 279; Jedlička, 1960: 231; Mlýň, 1974: 107; Paik, 1988a: 245; Lafer, 1989: 186; Paik, 1993a: 105, 1993b: 84.

Material examined. 1 ex., Kwanchon, ?, 27. IX 1900, P. Schmidt leg. (In Russian, ZIP); 1 ♂, 1 ♂, North Korea, N 322, Chu dong Ryul leg. (IBP).

Distribution. Korea (North, Central, South, Jeju), Japan (Honshu), NE, E and S China (to Gonkong),

Russia (S Khabarovsky and Pimorsky Terr., S Amur Reg.).

5. *Harpalus (Haploharpalus) froelichii* Sturm, 1818

Sturm, 1818: 117 (*Harpalus*); Kataev, 1989: 248; Lafer, 1989: 186.

Material examined. 1 ex., Nungi, HN, N Korea, 7. VIII 1950, Borchsenius leg. (In Russian, ZIP).

Distribution. Korea (North), NE and NW China, Mongolia, Russia (S Khabarovsky and Pymorsky Terr., Amur Reg., S Siberia, Europe part), Kazakhstan, Europe (except North).

Subgenus *Harpalus* Latreille, 1802, s. str.

6. *Harpalus (Harpalus) bungei* Chaudoir, 1844

Chaudoir, 1844: 451; Mlyänř, 1974: 108; Lafer, 1989: 194; Moon, 1995: 18-20, 79.

Material examined. 4 ex., N Korea, Chu Dong Ryul leg. (In Korean, IBP); among them 1 ♂ with N 337 and 1 ♀ with the inscription "Mt. Myohyangsan", PB, N Korea.

Distribution. Korea (North, Central, South, Jeju), Japan (Hokkaido, Honshu, Shikoku, Kyushu), NE and E China (to Sichuan), Mongolia, Russia (S Khabarovsky and Primorsky Terr., Amur Reg.).

7. *Harpalus (Harpalus) chalcatus* Bates, 1873

Bates, 1873: 263; Heyden, 1887: 246; Bates, 1888: 370; Tschitschérine, 1895: 161; Jedlička, 1960: 231; Mlyänř 1974: 107-108; Paik, 1988a: 244, 1993a: 104, 1993b: 84.

Material examined. 2 ♂, 2 ♀, without locality, N Korea, Chu Dong Ryul leg. (In Korean, IBP);

Distribution. Korea (North, Central, South, Cheju), Japan (Honshu, Shikoku, Kyushu), China.

***8. *Harpalus (Harpalus) chasanensis* Lafer, 1989**

Lafer, 1989: 189 (Fig. 133-2), 191, 193 (Fig. 137).

Material examined. 1 teneral ♂, Mt. Buchu, CB-JB, SKorea 21. IX 1900, P. Schmidt leg. (In Russian, ZIP).

Distribution. Korea (? North, ? Central, South), Russia (SW Pymorsky Terr.: the vicinity of Khasan).

***9. *Harpalus (Harpalus) ditinguendus kidanicus* Kataev, 1989**

Kataev, 1989: 192-193.

Material examined. 1 ♂, "Phjongjang, 1974, Kesong-si Prov., N Korea, 5-8. VI 1974" (IBP).

Distribution. Korea (Central), NE and NW China, Mongolia, Iran, Afghanistan, Kazakhstan, Asia Middle and Minor, Russia (S Khabarovsky and Pymorsky Terr., Amur Reg., Siberia, Europe part, Caucasus), Europe, NW Africa; subsp. *kidanicus* is known from S Khabarovsky and Pymorsky Terr., NE China and Mongolia.

***10. *Harpalus (Harpalus) egorovi* Lafer, 1989**

Kataev, 1989: 272 (*Harpalus* sp.); Lafer, 1989: 185 (Fig. 129-1), 192, 193 (Fig. 138).

Material examined. 3 ex., Nungi, HN, N Korea, 7. VIII 1950, Borchsenius leg. (In Russian, ZIP).

Distribution. Korea (North), ? NE China, Mongolia, Russia (Khabarovsky and Primorsky Terr., Magadan and Amur Reg., Siberia (to Altai)).

11. *Harpalus (Harpalus) major* (Motschulsky, 1850)

Motschulsky, 1850: 25 (*Erpeinus*); Kwon & Lee, 1986: 38 (*obesus* Mor.), 39 (*crassus* Tschitsch.); Kataev, 1989: 195-196 (*obesus* Mor.); Lafer, 1989: 189-190 (*obesus* Mor.); Kryzhanovskij et al., 1995: 143.

= *obesus* Morawitz, 1862: 222.

= *crassus* Tschitschérine, 1895: 158.

Notes. I confirmed the identity of both *H. obesus* Mor. and *H. crassus* Tschitsch. by comparing the types of both species preserved in ZIP. Later the synonymy of these taxa was confirmed and published by B. M. Kataev (1989). *H. obesus* was described by Morawitz (1862) on a female labelled as follows: "Zagan-olui, 239-1" and "239. *obesus* Mor." Zagan-olui (=Tsagan-olui) is located in Tschita Reg., Russia. The type series of *H. crassus* Tschitsch. in Tschitschérin's collection contains, in fact, a male and a female with equal labels though only a male was mentioned in the original description. The holotype, the male labelled as follows: "Korea (Staud. -Rttr.)" and "*crassus* ♂, Tschitschérin det." Kataev (1989) designated the male as "Lectotype" and two females including a female from Olchonsa (S Korea) as "Paralectotypes", but I consider that Kataev's designation were invalid because Tschitschérin himself already mentioned only a male in his original description. Moreover the female from Olchonsa (=Weoljeung-sa, KW) was collected 5 years later after the publication of *H. crassus*. The synonymy of *Harpalus obesus* Morawitz with *major* Motsch. was revealed by V. G. Shilenkov in 1976 and published by Kataev (1989). The holotype of *major* Motsch., a male with labels: "*Erpeinus major* Motsch., Mongolia", "Mongol.", "Lectotypus, *Harp. major* Mots., Shilenkov det., 1976", "=*H. obesus* Mor., Shilenkov det., 1976". In Motschulsky's original description, the species was described on the basis of a single specimen. The holotype is deposited in Motschulsky's collection in ZMM. All Korean specimens examined and the majority from the southern Primorsky Territory, Russia, have red legs, on the other hand *H. obesus* was described in a female with black legs. However this characteristic is variable within the species, from red to black.

Material examined. 1 ♀, Olchonsa (correct name is Weoljeung-sa, KW, S Korea) 20. VII 1900, P. Schmidt leg. (In Russian, ZIP).

Distribution. Korea (North, Central, South), NE China(?), Mongolia, Russia (Khabarovsky and Primorsky Terr., S Magadan, Kamtschatskaya and Amur Reg., south of E Siberia).

12. *Harpalus (Harpalus) modestus* Dejean, 1829

Dejean, 1929: 367; Heyden, 1887: 246 (*flavitaris* Dej.); Jedlička, 1960: 231; Lafer, 1989: 194.

Material examined. 3 ex., Sinangju, PN, N Korea, 5. VII 1950, Borchsenius leg.; 1 ex., Chôngju, PB, N Korea, 11. VI 1950, Borchsenius leg.; 1 ex., Maedun, HN, N Korea, 29. VII 1950, Borchsenius leg.; 1 ex., Puckch'on, HN, N Korea, 5. VIII 1950, Borchsenius leg.; 1 ex., Nungi, HN, N Korea, 7. VIII

1950, Borchsenius leg.; 2 ex., Bupun-Chankto CB-JB, S Korea, 20. IX 1900, P. Schmidt leg.; 1 ex., Mt. Buchu CB-JB, S Korea, 21. IX 1900, P. Schmidt leg. All the specimens in ZIP with the labels in Russian.

Distribution. Korea (North, Central, South), China, Mongolia, Russia (S Khabarovsky and Primorsky Terr., Amur Reg., S Siberia, Europe part, Caucasus), Kazakhstan.

***13. *Harpalus (Harpalus) nigrans* Morawitz, 1862**

Morawitz, 1862a: 221-222, Lafer, 1989: 189.

Material examined. 1 ♀, without locality, N Korea, Chu Dong Ryul leg. (IBP).

Distribution. Korea (North), ? Japan, ? NE China, Russia (S Kuriles: Iturup, Primorsky Terr., Amur Reg., S Siberia).

14. *Harpalus (Harpalus) pallidipennis* Morawitz, 1862

Morawitz, 1862a: 221; Heyden, 1887: 246; Tschitschérine, 1897: 52; Jedlička, 1960: 231; Mlýňář, 1974: 108; Lafer, 1989: 187; Moon, 1995: 28-30, 79.

Material examined. 29 ex. from the localities as follows: Nungi, Puckchong, Yandok, Sariwon, Cheongju, Kherin near Kapsan N Korea 1950, Borchsenius leg. (ZIP, all the specimens with the labels in Russian); 1 ♀, North Korea, N 343, Chu Dong Ryul leg. (In Korean, IBP).

Distribution. Korea (North, Central, South), Japan (Honshu, Kyushu), China, Mongolia, Russia (Khabarovsky and Primorsky Terr., SE Siberia).

***15. *Harpalus (Harpalus) quadripunctatus* Dejean, 1829**

Dejean, 1829: 326.

Material examined. 1 ♂, Hyangrobong, KW, S Korea 11. VI 1987, K.T. Park & U. Park. (In Korean, SU). Two other specimens were previously mentioned by Moon (1995, in manuscript).

Distribution. Korea (North, Central), Japan (Hokkaido), China, Mongolia, Russia (Kuriles, Sakhalin, Khabarovsky and Primorsky Terr., S Magadan, Kamtschatskaya and Amur Reg., Siberia, Europe part), Europe.

16. *Harpalus (Harpalus) tarsalis* Mannerheim, 1825

Mannerheim, 1825: 28; Jedlička, 1960: 231 (*lokayi* Jedl.); Kwon, Lee, 1986: 38 (*lokayi* Jedl.); Lafer, 1989: 191 (*lokayi* Jedl.); Kryzhanovskij et al., 1995: 144.

= *lokayi* Jedlička, 1929: 104-105.

Material examined. I collected this species in SW Primorsky Terr., Russia, near the Russian-Korean boundary, at the lower reaches of the Tumangang river: 1 ♂, 1 ♀, near Mt. Golubinyi Utyos, 9 km E of Khasan, in a grouve of *Padus asiaticus* under cliff on dune, 25 and 27. VII 1970, ♂. Lafer leg.; 1 ♂, same locality, 13. VI 1968, V. Nikolaev leg. All the specimen in IBP.

Distribution. Korea (North), Japan (Hokkaido, Honshu), NE China, Russia (Sakhalin, Khabarovsk and Primorsky Terr., Amur Reg., Siberia, S Europe part).

Genus *Trichotichnus* Morawitz, 1863

1. *Trichotichnus (Trichotichnus) coruscus* (Tschitscherin, 1895)

Tschitscherine, 1895: 161-164; Jedlička, 1962: 496; Mlýňář, 1974: 108; Lafer, 1989: 195.

Notes. Tschitscherin noted that he described this species based on a male and two females, which received from Reitter, in his original description. However, I found two syntypes, both males, in the Tschitscherin's collection (ZIP).

Material examined. 2 ♂, syntypes with same labels: "Korea (Staud.-Rtrr.)" and "*coruscus* m. Tschitscherin det."; 1 ex., Olchonsa (=Weoljeung-sa), KW, S Korea, 20. VII 1900, P. Schmidt leg.; 1 ex., "Mt. Sansanbon", 28. VII 1900, P. Schmidt leg. Last two specimens in ZIP with the labels in Russian.

Distribution. Korea (North, Central, ? South), ? Japan, NE and E China (to Taiwan), Russia (Sakhalin, Moneron, S Khabarovsk and Primorsky Terr.).

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한반도와 인접지역에 분포하는 Harpalina 亞族의 분류학적 정리

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한반도와 그 접경지역에 분포하는 Harpalina 亞族 30종에 대해 그들의 분포, 분류학적 소고, 그리고 모식표본에 대한 정보등을 정리하였다. 이들 재료들은 과거 러시아인 Schmidt 氏 (1950년), Borchsenius 氏 (1950년) 등에 의해 한반도 전역에서 채집, 러시아과학원 동물연구소 (St. Petersburg)와 생물토양연구소 (Vladivostok)에 보관된 것들과 북한인 주동열 氏에 의해 북한에서 채집된 표본들이었다. 그들 중 5種은 우리나라에서 처음 보고되는 미기록종이었다.

검색어 : *Harpalus*, *Ophonus*, *Pseudoophonus*, Carabidae, 딱정벌레목, 한국, 극동러시아

(Received: 10 December 1995)

(Accepted: 5 August. 1996)